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May 14, 1996

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: CC Docket No. 92-297
LMDS-GSO/FSS Sharing Rules

Dear Mr. Caton:

On April 29, 1996, a copy of Lockheed Martin Corporation's ("Lockheed Martin") "Potential LMDS Sharing Principles" was filed in the record in the above-captioned proceeding. On May 2, 1996, Texas Instrument, Inc. filed comments on the Lockheed Martin proposal. Lockheed Martin hereby submits the enclosed "Response to TI Letter Dated May 2, 1996," for inclusion in the record in this proceeding.

Should any questions arise with regard to the foregoing, kindly communicate with the undersigned.

Very truly yours,

Raymond G. Bender, Jr.
Counsel for Lockheed Martin Corporation

RGB/css
Enclosure

Response to TI Letter dated May 2, 1996

Dr. Richard Barnett
Consultant to Lockheed Martin
May 9, 1996

Lockheed Martin has reviewed Texas Instruments' comments to our "Potential LMDS Sharing Principles", and has the following response

Lockheed Martin again reminds the parties that it firmly supports the FCC's Band Plan Option 5, and is only interested in establishing acceptable sharing rules for Option 4 prime in the event that the Commission feels it is necessary to adopt that as a domestic US band plan. In that case the sharing rules for Option 4 prime must be such as to allow viable operations of the GSO/FSS systems, and must not be biased in favor of the LMDS interests.

Concerning TI's proposed modifications, we have the following comments:

1. We consider that the time period in which the LMDS licensees define their build-out plans should be no more than three months, as compared to the six months proposed by TI. Assuming that LMDS auctions take place in late 1996, the six-month time period would mean that GSO/FSS licensees would not be able to even consider candidate sites for gateway earth stations until mid-1997. If this is the time period required by the LMDS licensees to define their systems then Lockheed Martin proposes that the alternative definition of the LMDS service areas be used, namely the Rand McNally Areas.

2. Upon further reflection we do not believe that it is necessary to define a 16 km "buffer zone" around the LMDS service areas. Instead it is sufficient to simply protect the LMDS hub stations (located in the LMDS service areas) by a defined PFD limit, from any GSO/FSS earth station, irrespective of its location within or outside of the LMDS service area. We certainly do not accept the concept of a defined PFD limit at the boundary of the LMDS service area, which is a harsh and unnecessary constraint on the GSO/FSS operations.

3. We do not believe that it is necessary to define an aggregate PFD limit, and that a single entry value is more appropriate, for the following reasons. Although GSO/FSS systems employ spatial frequency re-use, this is achieved only between relatively widely spaced satellite beams. It would be impossible for a single GSO/FSS system to spatially re-use an uplink frequency between two earth stations that are sufficiently close to the LMDS hub station to both cause significant interference simultaneously. Therefore, the single entry value is the simplest and most appropriate to use.

4. The PFD limit value proposed earlier by Lockheed Martin (-95dBW/m^2/MHz) was based upon the 28 GHz Negotiated Rulemaking Committee Final Report, and should adequately protect LMDS interests. It can be shown that this PFD limit value puts an equitable burden on both LMDS and GSO/FSS, in terms of the resulting C/I ratio that each must tolerate. We are not prepared to accept the more stringent value of -98 dBW/m^2/MHz proposed by TI.

5. Finally, the <u>improved</u> subscriber off-axis gain envelope referred to by Lockheed Martin in its earlier submission has been reproduced below. With this mask, <u>together with the other constraints concerning the maximum EIRP spectral density of the LMDS subscriber transmitters referred to by Lockheed Martin in its earlier submission</u>, we believe the uplink interference from the LMDS subscriber transmitters will be acceptable.